

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB2004/004428

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 A61B5/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4 197 852 A (SCHAL, WILFRIED ET AL) 15 April 1980 (1980-04-15) column 3, lines 21-64; figure 1 -----	1-4
A	US 5 165 407 A (WILSON ET AL) 24 November 1992 (1992-11-24) abstract; figure 1 -----	1-6
A	US 5 158 083 A (SACRISTAN ET AL) 27 October 1992 (1992-10-27) the whole document -----	1-6

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### \* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

25 January 2005

Date of mailing of the international search report

23.05.2005

Name and mailing address of the ISA

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## Box II Observations where certain claims were found unsearchable (Continuation of Item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box III Observations where unity of invention is lacking (Continuation of Item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-6

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

**FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210**

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-6

Sensing device comprising :  
a sensor for insertion inside the body to measure one of the following parameters : partial CO2 pressure, partial oxygen pressure, temperature, pH, glucose concentration;  
an electrical cable for connection to the sensor;  
a sheath;  
wherein the sheath comprises a plurality of longitudinally extending flexible portions to maintain the sensor inside the body.

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2. claims: 7-9

Sensing device comprising :  
a sensor for sensing partial CO2 pressure having two electrodes;  
an electrical cable connected to the electrodes;  
a sheath  
wherein the sheath forms the carbon dioxide permeable membrane.

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3. claims: 10-16

Sensing device comprising :  
a sensor for insertion into the tissue to measure one of the following parameters : partial CO2 pressure, temperature, pH, glucose concentration;  
a signal processing device;  
a reference electrode;  
wherein the reference electrode is configured to compensate the electrical signals from the electrical sensor for electromagnetic noise from the patient by reference to signals from the reference electrode.

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4. claim: claim 17

Method of manufacturing a sensor comprising :  
a sensor body having a water-filled chamber closed by a semi-permeable membrane, the method comprising :  
immersing the sensor in water; and  
attaching the membrane to the sensor body to close the chamber while the sensor body is in the water.

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